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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant(s):	Zare et al.		
Title:	Immobiled-Enzyme Microreactor Devices for Characterization of Biomolecular Analytes and Associated Methods		
Serial No.:	10/734,998	Filed:	December 12, 2003
Examiner:	Unknown	Group Art Unit:	1645
Docket No.:	STNB.069US0	Conf. No.:	1999

Certificate of Mailing Under 37 CFR 1.8

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Eileen Bowen

Signature

Mail Stop Amendment
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

SUPPLEMENTAL INFORMATION DISCLOSURE STATEMENT UNDER 37 CFR § 1.97(b)

Dear Sir:

Pursuant to 37 C.F.R. § 1.56, § 1.97 and § 1.98, the documents listed on the accompanying form PTO-1449 are called to the attention of the Examiner for the above patent application.

This application has a filing date after June 30, 2003. Copies of the U.S. Patent and Published Patent Application documents listed on the accompanying Form PTO-1449 are not enclosed. Copies of Other Art listed on the accompanying Form PTO-1449 are enclosed.

Listing of these documents shall not be construed as:

1. an admission that the documents are necessarily prior art with respect to the instant invention;

2. a representation that a search has been made; or

3. an admission that the information listed herein is, or is considered to be, material to patentability as defined in § 1.56(b).

This information disclosure statement is submitted under 37 C.F.R. § 1.97(b) and consequently no fee should be required. The Commissioner is authorized, however, to charge any fee that may be required, or to credit any overpayment, against Deposit Account No. 502664.

Respectfully submitted,

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U.S. Department of Commerce, Patent and Trademark	Atty. Docket No.	Application No.
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	Applicant(s)	**Conf. No.**
(Use several sheets if necessary)	Zare et al.	1999
(Form PTO-1449)	**Filing Date**	**Group**
	12/12/03	1645

U.S. Patent Documents

*Examiner Initial		Document Number	Date	Name	Class	Subclass	Filing Date If Appropriate

U.S. Published Patent Application Documents

*Examiner Initial		Document Number	Date	Name	Class	Subclass	Filing Date If Appropriate
	1	2002/0150923A1	10/17/02	Malik			
	2	2003/0150811A1	8/14/03	Walter et al.			
	3	2003/0213732A1	11/20/03	Malik et al.			
	4	2003/0062310A1	4/3/03	Zare et al.			
	5	2003/0062308A1	4/3/03	Zare et al.			
	6	2002/0079257A1	6/27/02	Zare et al.			
	7	2004/0055940A1	3/25/04	Zare et al.			
	8	2003/0062309	4/3/03	Zare et al.			

Foreign Patent Documents

							Translation	
		Document	Date	Country	Class	Subclass	Yes	No

OTHER ART (Including Author, Title, Date, Pertinent Pages, Etc.)

	9	Brown, "The Rapid Separation of Nucleotides in Cell Extracts Using High-Pressure Liquid Chromatography," *Journal of Chromatography*, 52, pp. 257-272 (1970).
	10	Monsan et al., "Enzyme Stabilization by Immobilization," *Methods in Enzymology*, Vol. 137, pp. 584-598.
	11	Shimada et al., "Immobilized Enzyme Reactors for Detection Systems in High-Performance Liquid Chromatography," *Journal of Chromatography*, 492, pp. 345-359 (1989).
	12	Cobb et al., "High-Sensitivity Peptide Mapping by Capillary Zone Electrophoresis and Microcolumn Liquid Chromatography, Using Immobilized Trypsin for Protein Digestion," *Anal. Chem.* 61, pp. 2226-2231 (1989).
	13	Nashabeh et al., "Enzymophoresis of Nucleic Acids by Tandem Capillary Enzyme Reactor – Capillary Zone Electrophoresis," *Journal of Chromatography*, 596, pp. 251-265 (1992).
	14	Avnir et al., "Enzymes and Other Proteions Entrapped in Sol-Gel Materials," *Chem. Mater.* Vol. 6, No. 10, pp. 1605-1614 (1994).

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	15	Braun et al., "Biochemically Active Sol-Gel Glasses: The Trapping of Enzymes," *Materials Letters*, Vol. 10, No. 1,2, pp. 1-5, September 1990.
	16	Avnir et al., "Encapsulation of Organic Molecules and Enzymes in Sol-Gel Glasses, " *Supermolecular Architecture: Synthetic Control in Thin Films and Solids*, Vol. 499, Ch. 27, pp. 384-404 (1992).
	17	Braun et al., "Biocatalysis by Sol-Gel Entrapped Enzymes," *Journal of Non-Crystalline Solids*, 147 & 148, pp. 739-743 (1992).
	18	Avnir et al., "Chemically Active Organically Doped Sol-Gel Materials: Enzymatric Sensors, Chemical Sensors and Photoactive Materials," *SPIE*, Vol. 1758, Sol-Gel Optics II (1992).
	19	Altstein et al., "Sol-Gel Entrapped Cholinesterases: A Microtiter Plate Method for Monitoring Anti-Cholinesterase Compounds," *J. Agric. Food Chem.*1998, 46, pp. 3318-3324.
	20	Gelman et al., "Sol-Gel Entrapped Chiral Rhodium and Ruthenium Complexes as Recyclable Catalysts for the Hydrogenation of Itaconic Acid," *Journal of Molecular Catalysis A: Chemical* 146 (1999) pp. 123-128.
	21	Reetz et al., "Entrapment of Lipases in Hydrophobic Sol-Gel-Materials: Efficient Heterogeneous Biocatalysts in Aqueous Medium," *Synthesis*, 2000, No. 6, pp. 781-783.
	22	Kato et al., "Integration of On-Line Protein Digestion, Peptide Separation, and Protein Identification Using Pepsin-Coated Photopolymerized Sol-Gel Columns and Capillary Electrophoresis/Mass Spectrometry," *Anal. Chem.* 2004, 76, pp. 1896-1902.

Examiner	Date Considered

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with your communication to applicant.